DOCUMENT RESUME

ED 167 872 CG 013 268

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TITLE Group Versus Individual Cognitive Therapy: A Pilot Study.
PUB DATE [78]
NOTE 26p.

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Cognitive Processes; Comparative Analysis; *Counseling Effectiveness; *Depression (Psychology); *Drug Therapy; *Group Therapy; Helping Relationship; *Individual Counseling; Medical Treatment; Patients (Persons); Pilot Projects

ABSTRACT

Group therapy and individual cognitive therapy were investigated with non-bipolar moderate-to-severely-depressed outpatients (N=44) assigned to group cognitive therapy, individual cognitive therapy only, or to individual cognitive therapy in combination with anti-depressant medication. Treatment efficacy was measured by self-report and a clinical rating scale. Each of the three treatments was associated with a statistically significant improvement compared to pretreatment symptom levels. However, group therapy resulted in a less complete symptomatic remission than did individual therapy, with or without the addition of anti-depressant medication. Almost half of those who completed group treatment did not obtain a symptomatic remission. Results also indicated that anti-depressant medication did not add to either the rapidity or the overall degree of symptom reduction obtained with cognitive therapy alone conducted in an individual format. (Author)

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Group Versus Individual Cognitive Therapy: A Pilot Study

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Forty-four non-bipolar, moderate to severely depressed outpatients were assigned to group cognitive therapy, individual cognitive therapy only, or to individual cognitive therapy in combination with anti-depressant medication. Treatment efficacy was measured by self-report and a clinical rating scale. Each of the three treatments was associated with a statistically significant improvement compared to pretreatment symptom levels. However, group therapy when compared to individual therapy, with or without the addition of anti-depressant medication, resulted in a less complete symptomatic remission. In fact, almost half of those who completed group treatment did not obtain a symptomatic remission (BDI < 16). In our small sample, anti-depressant medication did not add to either the rapidity or the overall degree of symptom reduction obtained with cognitive therapy alone conducted in an individual format.

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Cognitive therapy consists of a number of treatment techniques based on a specific theoretical approach to psychopathology. Cognitive theory is based on the assumption that "affective responses are determined by the way an individual structures his experience," (Beck, 1963). This information has spawned the development of a variety of techniques for the treatment of depressed outpatients. These techniques have recently been compiled in a guide to treatment (Beck, Rush, Shaw and Emery, 1978).

Recently, several outcome studies have compared the efficacy of cognitive therapy with various control groups in the treatment of depressed clients. Subject populations included depressed college student volunteers (Shipley and Fazio, 1973; Gioe, 1975; Taylor and Marshall, 1977) and depressed psychiatric clinic patients (Morris, 1975; Schmickley, 1976; Shaw, 1977). Generally cognitive therapy exceeded the efficacy of waiting list and other psychotherapy comparison groups. In a recent study by Rush, Beck, Kovacs, and Hollon (1977) cognitive therapy exceeded pharmacotherapy in reducing depressive symptomatology in psychiatric outpatients. Although cognitive therapy generally exceeded the efficacy of various other treatments, the actual format in which cognitive therapy was dispensed varied in these studies. A group format was used by some investigators (Shipley and Fazio, 1973; Gioe, 1975; Morris, 1975; and Shaw, 1977), whereas others treated patients individually (Schmickley, 1976; Rush, et al., 1977; and Taylor and Marshall, 1977). No previous comparative studies have determined whether the format itself (i.e., group or individual) significantly influences the efficacy of treatment.

The authors have been involved in trying to identify specific modifications in cognitive therapy that might improve its efficacy and/or general acceptability to psychologically naive patients. This pilot study was undertaken to

determine whether administration of cognitive therapy to groups of depressed outpatients would be as effective as cognitive therapy administered to individuals. In addition, we wanted to determine whether the addition of antidepressant medication would significantly affect either outcome or attendance in our psychologically naive patient population.

METHOD

Subjects

Each patient received a thorough evaluation and met a series of specific criteria. To be accepted into the study, patients had to meet the following inclusion criteria: (a) a "definite" depressive syndrome diagnosis according to the criteria of Feighner, Robins, Guze, Woodruff, Winokur, and Munoz (1972); and, (b) a moderate to severe level of depression defined as a minimum score of twenty on the self-rated Beck Depression Inventory (Beck, Ward, Mendelson, Mock, and Erbaugh, 1961) and a minimum score of fourteen on the seventeen item Hamilton Rating Scale for Depression (Hamilton, 1960, 1969).

Patients were excluded from the study for the following: psychosis (schizophrenia, bipolar affective disorder), substance abuse (alcoholism, drug addiction), organic brain syndrome, mental retardation, anti-social personality disorder.

Of one hundred thirty two applicants fully evaluated, forty-four patients met all of the inclusion and none of the exclusion criteria. All patients satisfied the description of neurotic depression according to the DSM II (American Psychiatric Association, 1968). However, a significant number of these patients had "endogenous" symptoms (decreased weight, appetite, sleep, and libido).

Table 1 shows the general demographic characteristics for the final study sample. The modal patient was a white female in her late thirties, with a slightly better than high school education. No statistically significant differences were obtained between any of the sub-groups of patients for age or education.

TABLE 1 GOES ABOUT HERE

Table 2 shows the history of the present illness for our sample. Most patients had had previous episodes of depression. About 20% of the sample had been depressed for more than one year. Most patients had seen a psychotherapist prior to the study. Twenty-seven percent of the sample had had previous psychiatric hospitalization(s). Roughly, two-thirds of the group reported suicidal ideation and about one-third had previously had a suicidal attempt.

TABLE 2 GOES ABOUT HERE

Treatment Modalities

A major emphasis in this study was to conduct cognitive therapy in a group format. We anticipated that this modality might increase adherence, decrease dropouts, and possibly offer a vehicle for improving the effectiveness of cognitive therapy in our patient sample. Due to limited staff availability, it was not possible to make all three treatment methods available simultaneously during the study. We therefore assigned most clients to group treatment when a group was ready to start and patients to individual cognitive therapy

and antidepressant medication as individual therapists became available and groups were closed. All assignments to treatment were determined prior to and independent of the evaluation of a specific patient.

Of forty-four patients, twenty-eight were assigned to group cognitive therapy, nine received individual cognitive therapy, and seven were treated with individual cognitive therapy in combination with anti-depressant medication. Protocol called for a maximum of twenty group or individual cognitive therapy sessions over a ten to twelve week period. Individual sessions were 50 minutes in duration while group sessions were 75-90 minutes long.

Individual Cognitive Therapy. The assumptions and techniques of cognitive therapy have been described at length elsewhere (Beck, et al., 1978). Individual cognitive therapy was conducted according to the treatment manual. In short, the cognitive therapist uses both verbal and behavioral techniques to help the patient learn to: (a) recognize relationships between cognitions, affects, and behaviors; (b) monitor his/her negative thoughts; (c) examine the evidence for and against each distorted negative thought, and (d) substitute more reality-oriented interpretations for maladaptive, distorted thinking. In addition, the patient learns to identify and alter dysfunctional beliefs which predispose to distorted negative evaluations of experience. Cognitive therapy employs homework assignments between treatment sessions to provide the patient with opportunities to apply the techniques learned in therapy in his/her daily life.

Group Cognitive Therapy. Some adaptations of the individual therapy was necessary for group cognitive therapy. A basic strategy employed was to carefully "socialize" the patients for the treatment program. Preparation for group therapy involved dealing with any negative thoughts about being

treated in a group format, any anticipated negative responses from other members, and the patients' depressogenic cognitions about their respective performances in the group.

Several other differences occurred in the group setting. Individuals were able to engage successfully in the cognitive therapy at various rates. Thus, some persons acted as role models for others and demonstrated how to work with specific cognitions in a task-oriented way. In addition, group norms were developed which seemed to facilitate compliance with treatment prescription. For example, once carrying out homework assignments to examine automatic negative thoughts and to record them in a notebook was established as a norm, compliance by others was facilitated.

Importantly these cognitive therapy groups were not group "process" oriented, but rather were much more "task" oriented with the focus being on one or two members at a time. While group feedback was utilized selectively to enhance the client's insight into his own cognitive distortions, patient interactions were not particularly examined for possible transference or group process phenomena.

Individual Cognitive Therapy Plus Anti-Depressant Medication. All patients were monitored for side effects, and a full medical evaluation was conducted prior to treatment with pharmacotherapy. The selection of anti-depressant medication was left to the judgment of the treating physician. Medication consisted of tricyclic anti-depressants (N = 5), a monoamine oxidase inhibitor (MAOI) (N = 1) or lithium carbonate (N = 1). Tricyclic medication consisted of not less than 150 mg./day of amitriptyline or doxepin; MAOI treatment consisted of phenelzine 60-90 mg./day; lithium carbonate was used to obtain a therapeutic serum level of 0.8-1.2 milliequivalents/liter.

Most patients receiving individual cognitive therapy only or group therapy

only were kept completely free of psychotropic medication during the study. A few patients (five of the twenty-eight assigned to the group) entered evaluation already taking psychotropic medication previously prescribed. This medication was kept unchanged in both dose and frequency during the entire course of treatment.

Therapists

Seven therapists participated in the study: two staff psychiatrists, one staff psychologist, two staff social workers, and two clinical psychology interns. Each had significant experience in group therapy and had treated at least two depressed outpatients with cognitive therapy prior to the study. These therapists treated patients in both the individual and group formats. Cognitive therapy sessions were intermittently videotape or audiotape recorded. All therapists were systematically supervised on a weekly basis by both authors, who also treated study patients in both group and individual formats.

RESULTS

Subjects in all three treatment modalities showed significant reduction in depressive symptomatology. The outcome data are tabulated and presented in two ways: (a) for clients who completed ("completers") each modality (Table 3), and (b) for the entire sample ("completers plus dropouts") admitted to each treatment (Table 4). Analyses of treatment termination data for the full sample were done using end-point analysis (Friedman, 1975), i.e., the last recorded score for a prematurely terminated subject is carried through all subsequent analyses on a particular measure. For each treatment modality *t*-tests were employed to assess the effects of treatment intervention.

Table 3 shows that for completers, each treatment resulted in a measureable reduction of depressive symptomatology by the end of treatment compared to pretreatment scores according to the Beck Depression Inventory (BDI). T-test comparisons of BDI scores pre- and post-treatment for each of the treatment modalities were significant at $p < .01$. If the dropouts are included in the analysis (Table 4), the same findings hold, i.e., each treatment resulted in a change at the .01 level of significance.

TABLES 3 & 4 GO ABOUT HERE

T-tests were used to compare post-treatment BDI scores for completers only across the various treatment conditions. No significant difference between individual therapy only and individual therapy plus medication was found. On the other hand, group treatment resulted in a significantly poorer outcome than individual therapy only ($p < .05$) and in a poorer outcome than individual therapy plus medication ($p < .01$). Obviously, if one combines the two individual treatment conditions (i.e., completers in individual therapy only and individual therapy plus medication) and compares their post-treatment BDI scores with those completing group therapy, the group therapy patients do significantly more poorly ($p < .01$).

Similar results are obtained if dropouts are included in the analyses. Again, no significant difference between individual only and individual in combination with medication was found. The effects of group therapy were exceeded by individual therapy only ($p < .02$) as well as by individual therapy plus medication ($p < .01$). Finally, group treatment resulted in significantly poorer results in comparison to the combined individual treatment with and without medication ($p < .01$).

Table 5 presents treatment termination levels of depression, assessed by the self-rated BDI for each treatment condition. Recall that each patient began treatment with a BDI of 20 or greater. Thus, by the end of treatment, 43.5% of group, 37.5% of individual, and 71.4% of individual plus medication patients were in complete remission (BDI $<$ 10). On the other hand, 47.8% of those in group, 12.5% of those in individual, and zero percent of those in individual therapy plus medication were unremitted (BDI $\geq$ 16).

TABLE 5 GOES ABOUT HERE

Table 6 shows the pre-treatment and post-treatment Hamilton Rating Scale for Depression (HRS-D) scores for the subsample tested from each treatment condition. These ratings are consistent with those found by the BDI for the whole sample, viz., significant reductions in depressive symptoms at the end of each treatment condition with group treated subjects demonstrating the least absolute degree of symptomatic improvement.

TABLE 6 GOES ABOUT HERE

A mean BDI score for each treatment condition was calculated every two weeks during active treatment (Figure 1). The addition of medication to individual cognitive therapy did not produce faster remission of depressive symptomatology. Figure 2 compares patients treated in group therapy with those who received either individual (I) treatment alone or in combination with medication (IM). Note that group treatment initially produced as rapid symptomatic remission as individual therapy whether or not it was combined with medication. Over the latter part of therapy, however, group treated

patients appeared to lag in responsivity compared to those in the individual treatment conditions.

FIGURES 1 & 2 GO ABOUT HERE

Follow-up data were obtained from a subsample of the subjects treated with group therapy. In these ten patients, a two month follow-up revealed a mean BDI of 12.4 compared to a post-treatment BDI of 15.4 and a HRS-D of 9.1 compared to a post-treatment HRS-D of 11.8. T-tests revealed no significant change in symptom level for these patients at follow-up compared to post-treatment measures.

DISCUSSION

Group therapy in general has rarely been studied empirically as a vehicle for treating depressed patients in comparison to other forms of treatment. From the few studies available, results have not been encouraging (Covi, Lipman, Derogatis, Smith and Pattison, 1974). With regard to cognitive therapy specifically, some studies that have employed a group format (e.g., Shaw, 1977) have shown that cognitive therapy is effective in comparison to other types of therapy or waiting list controls.

This was a pilot study to determine the potential added efficacy of conducting cognitive therapy in a group format. Of particular concern was whether the efficacy of cognitive therapy and/or its holding power (its ability to preclude or reduce dropouts) might be enhanced by employing a group format.

In this study subjects assigned to either individual or group treatment were similar both with respect to diagnosis and demographic factors. Further, the same therapists participated in both group and individual therapy. If there was any bias in therapist attitude, it was toward believing that group therapy would be more effective than individual treatment. Thirdly, the same therapy techniques were employed in both formats and both groups of patients (whether treated in group or individual formats) were treated for similar lengths of time and numbers of therapist contact hours. The authors found that contrary to their expectations, the efficacy of group therapy was not as great as individual treatment (with or without medication). There was no statistically significant difference in the dropout rates between treatment conditions in this pilot study. Our results are in some ways comparable to a recent report on group cognitive therapy with 10 symptomatically depressed outpatients (Shaw and Hollon, 1978). In that study only five patients obtained full remission (BDI $\leq$ 9) by the end of group treatment, and three initially symptomatic patients dropped out of group cognitive therapy.

Our study bears careful replication. Not only was the sample small, but strict randomization was not feasible, although treatment assignment was determined prior to and independent of each subject's evaluation. In addition, more follow-up data are needed to determine whether gains obtained by patients in group therapy are as lasting as those obtained in individual treatment.

ACKNOWLEDGMENTS

We wish to express our appreciation to Steve Kowalski for his assistance in data analysis, to Ms. Vicki Andruss and to Ms. Shirley Poteet for their secretarial efforts, to our therapists: Dr. Manoochehr Khatami, Dr. Stanley Rest, Ms. Jacque Cook, Ms. Sheila Howard, and Ms. Danita Czyzewski.

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TABLE 1

DEMOGRAPHIC CHARACTERISTICS
OF PATIENTS ASSIGNED TO TREATMENT

	Group Therapy (N=28)	Individual Therapy (N=9)	Individual Therapy Plus Medication (N=7)	Full Sample (N=44)
Sex				
Male	4	1	1	6
Female	24	8	6	38
Race				
White	27	7	7	41
Non-white	1	2	0	3
Mean age in years	38.3	37.0	45.7	39.2
Mean years of education	12.2	13.8	13.0	12.6
Employment				
Employed	9	7	1	17
Unemployed	19	2	6	27
Marital Status				
Single	3	1	0	4
Married	12	3	6	21
Other	13	5	1	19

TABLE 2

HISTORY OF PRESENT ILLNESS
OF PATIENTS ASSIGNED TO TREATMENT

Variable	Group Therapy (N=28)	Individual Therapy (N=9)	Individual Therapy Plus Medication (N=7)	Full Sample (N=44)
Median Number of previous depressive episodes	2.0	1.7	2.6	2.1
Duration of current depressive episode				
1 year or less	21	8	6	35
More than 1 year	7	1	1	9
Median number of previous therapists	2.00	1.70	0.86	1.75
Patients with previous psychiatric hospitalizations	9	1	2	12
Patients with previous tricyclic treatment	9	3	4	16
Patients reporting suicidal ideation at evaluation	16	8	5	29
Patients with prior suicide attempts	11	1	1	13

TABLE 3

MEAN BECK DEPRESSION INVENTORY SCORES
AT INITIATION AND TERMINATION
OF TREATMENT-COMPLETERS ONLY

Time of Assessment		Group Therapy (N=23)	Individual Therapy (N=8)	Individual Therapy Plus Medication (N=7)	Full Sample (N=38)
Pretreatment	$\bar{X}$	29.2	29.5	31.3	29.6
	SD	6.2	7.8	9.1	6.9
Post-Treatment	$\bar{X}$	16.2	8.6	5.9	12.7
	SD	12.8	6.7	5.1	11.4

TABLE 4

MEAN BECK DEPRESSION INVENTORY SCORES
AT INITIATION AND TERMINATION
OF TREATMENT (COMPLETERS PLUS DROPOUTS)

Time of Assessment		Group Therapy Only (N=28)	Individual Therapy Only (N=9)	Individual Therapy Plus Medication (N=7)	Full Sample (N=44)
Pretreatment	$\bar{X}$	29.0	28.9	31.3	29.4
	SD	6.3	7.5	9.1	6.9
Post-treatment	$\bar{X}$	15.9	8.9	5.9	12.9
	SD	12.0	6.3	5.1	11.0

TABLE 5

STATUS AT TERMINATION OF TREATMENT
ACCORDING TO BECK DEPRESSION INVENTORY

Status (BDI)	Group Therapy (N=28)	Individual Therapy (N=9)	Individual Therapy Plus Medication (N=7)	Individual Therapy With Or Without Medication (N=16)	Full Sample (N=44)
0-9	10	3	5	8	18
10-15	2	4	2	6	8
$\geq$ 16	11	1	0	1	12
Dropout	5	1	0	1	6
Total Assigned to Treatment	28	9	7	16	44

TABLE 6

PRE- AND POST-TREATMENT HRS-D SCORES
FOR A SUBSAMPLE OF PATIENTS

		Group Therapy		Individual Therapy		Individual Therapy Plus Medication		Full Sample	
		Pre (N=16)	Post (N=16)	Pre (N=6)	Post (N=6)	Pre (N=5)	Post (N=3)	Pre (N=27)	Post (N=24)
Mean	$\bar{X}$	20.5	10.7	22.1	7.7	24.0	8.3	21.5	9.8
	SD	7.7	6.1	7.1	4.5	10.4	9.4	7.9	6.0

Figure 1: BDI Group Means for Individual vs. Individual Therapy Plus Medication (Completers Only)

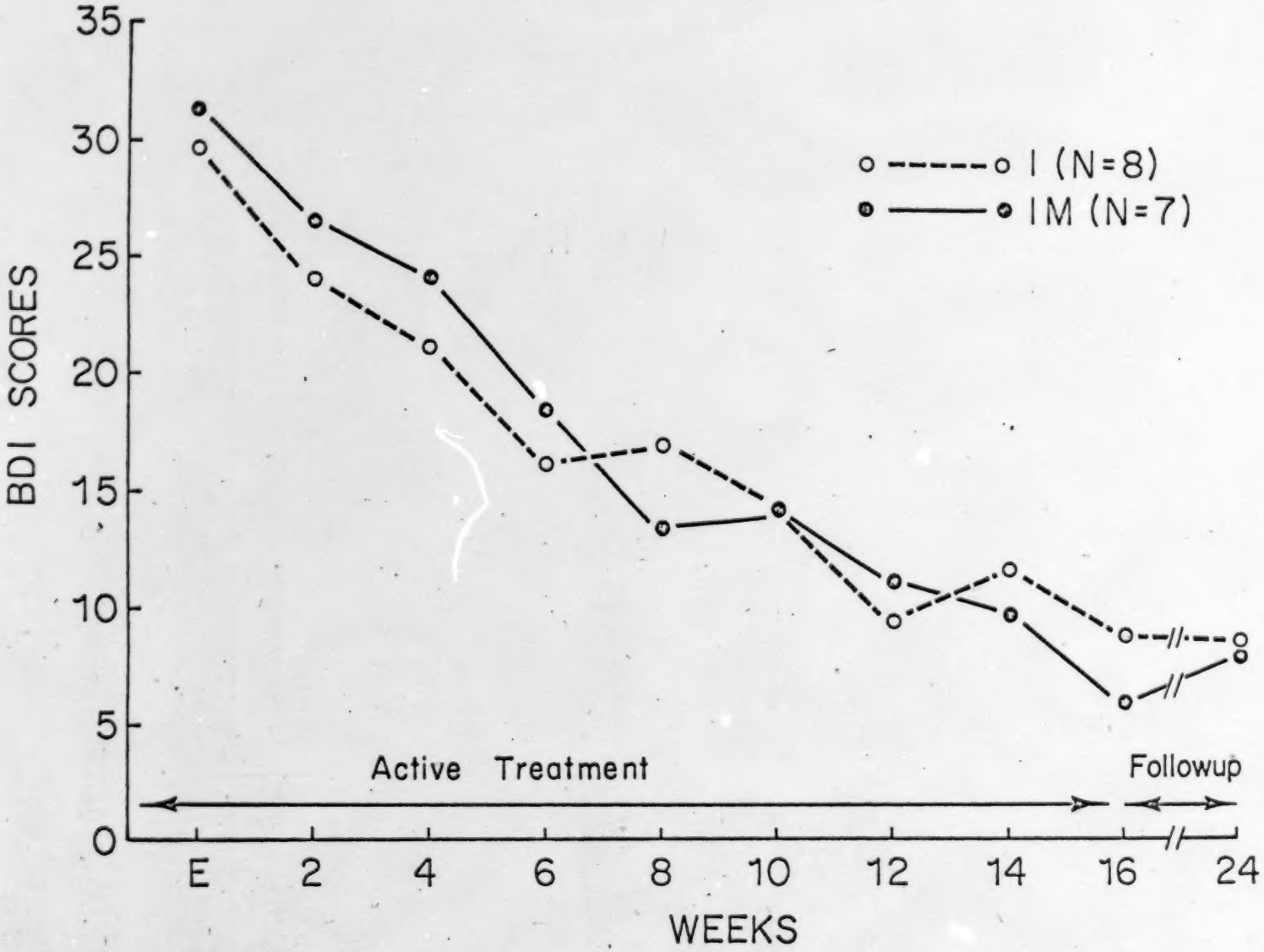

Figure 2: BDI Group Means for Group Therapy vs. Individual Therapy With and Without Medication (Completers Only)